

## **Section II. Amendments to the Claims**

Please amend claims 1-3, 6, 9-11, 14, 20-21, 23, 26-28, 62-63 and 79, and cancel claims 5 and 40-42, as set out in the following listing of claims 1-80 of the application.

1. (Currently Amended) A recombinant double stranded RNA phage (rdsRP) ~~encoding~~ comprising a double stranded RNA eukaryotic expression cassette for expression in eukaryotic cells, the rdsRP comprising:

at least one genomic segment of a double stranded RNA phage (dsgP) and an internal ribosome entry site (IRES) nucleotide sequence incorporated into the at least one genomic segment of the dsRP.

2. (Currently Amended) The rdsRP according to claim 1, further comprising at least one passenger gene sequence incorporated into the at least one genomic segment of the dsRP.

3. (Currently Amended) The rdsRP according to claim 1, wherein the IRES is inserted into at least one of three dsRNA genomic segments of the dsRP selected from the group consisting of segment L, segment M and segment S.

4. (Original) The rdsRP according to claim 2, wherein the passenger gene and the IRES are functionally linked.

5. (Cancelled)

6. (Currently Amended) The rdsRP according to claim 1, ~~further comprising~~ wherein said eukaryotic expression cassette is an alpha virus expression cassette.

7. (Original) The rdsRP according to claim 2, wherein the passenger gene encodes for an immunogen.

8. (Original) The rdsRP according to claim 1, wherein the dsRP is Phi-6, Phi-8, or Phi-13.

9. (Currently Amended) The rdsRP according to claim 2, wherein the rdsRP genomic segment is expressed and amplified in a bacterial host strain.
10. (Currently Amended) The rdsRP according to claim 7, wherein the rdsRP genomic segment further ~~encodes for~~ comprises an adjuvant as an additional passenger gene.
11. (Currently Amended) The rdsRP according to claim 7, wherein the rdsRP genomic segment further ~~encodes for~~ comprises a cytokine.
12. (Original) The rdsRP according to claim 7, wherein the immunogen is foreign or endogenous.
13. (Original) The rdsRP according to claim 12, wherein the immunogen is foreign and is a member selected from the group consisting of viral proteins, bacterial proteins, parasite proteins, cytokines, chemokines, immunoregulatory agents, and therapeutic agents.
14. (Currently Amended) The rdsRP according to claim 13, wherein the immunogen originates from a viral pathogen, bacterial pathogen, or parasitic ~~pathogens~~ pathogen.
15. (Original) The rdsRP according to claim 14, wherein the immunogen originates from a viral pathogen comprising a member selected from the group consisting of Orthomyxoviruses, Retroviruses, Herpesviruses, Lentiviruses, Rhabdoviruses, Picornoviruses, Poxviruses, Rotavirus and Parvoviruses.
16. (Original) The rdsRP according to claim 13, wherein the viral protein is a member selected from the group consisting of: human immunodeficiency virus antigens, Nef, Rev, mutant derivatives of Tat, Tat-A31-45, Pol, T cell epitopes of gp120, and B cell epitopes of gp120, chimeric derivatives of HIV-1-CD4, chimeric Env-CD4, chimeric gp120-CD4, hepatitis B surface antigen, rotavirus antigens, influenza virus antigens, and herpes simplex virus antigens.
17. (Original) The rdsRP according to claim 12, wherein the immunogen is endogenous and is a member selected from the group consisting of cellular proteins, immunoregulatory agents,

therapeutic agents, tumor immunogens, autoimmune immunogens and parts thereof.

18. (Original) The rdsRP according to claim 17, wherein the tumor immunogen comprises a member selected from the group consisting of PSA, CEA, MAGE-1 and tyrosinase.

19. (Original) The rdsRP according to claim 10, where the adjuvant comprises a member selected from the group consisting of: A subunit of cholera toxin, bacterial adenosine diphosphate-ribosylating exotoxins, pertussis toxin S1 subunit, adenylate cyclase-hemolysins of *Bordetella pertussis*, and parts thereof.

20. (Currently Amended) The rdsRP according to claim 11, wherein the cytokine ~~comprises~~ is a member selected from the group consisting of; interleukin-4, IL-5, IL-6, IL-10, IL-12<sub>p40</sub>, IL-12<sub>p70</sub>, TGF $\beta$  and TNF $\alpha$ .

21. (Currently Amended) The rdsRP according to claim 2, wherein the IRES comprises a member selected from the group consisting of: the IRES located at nucleotides 665-1251 in pIRES2-EGFP (SEQ ID NO: 6), IRES from plasmid pCITE4a (SEQ ID NO: 7), IRES from plasmid pSVIRES-N (SEQ ID NO: 4), IRES of the 3'-untranslated region of the mRNA for the beta subunit of mitochondrial H<sup>+</sup>-ATP synthase (SEQ ID NO: 8), (GenBank Accession #: Y11034.1; SEQ ID NO: 1), (GenBank Accession #: AF171227.1; SEQ ID NO: 2), (GenBank Accession #: Y07702.1; SEQ ID NO: 3), (GenBank Accession #: AJ000156.1; SEQ ID NO: 4) and (GenBank Accession #: D88622.1; SEQ ID NO: 5).

22. (Original) A composition comprising the rdsRP according to claim 4.

23. (Currently Amended) The composition according to claim 22, ~~further comprising~~ wherein the rdsRP comprises an alpha virus expression cassette.

24. (Original) The composition according to claim 22, wherein the passenger gene encodes for an immunogen.

25. (Original) The composition according to claim 22, wherein the dsRP is Phi-6, Phi-8, or Phi-13.

26. (Currently Amended) The composition according to claim 22, wherein the rdsRP genomic segment is amplified in a bacterial host strain.

27. (Currently Amended) The composition according to claim 22, wherein the rdsRP genomic segment further encodes for an adjuvant as a second passenger gene.

28. (Currently Amended) The composition according to claim 22, wherein the rdsRP genomic segment further encodes for a cytokine.

29. (Original) The composition according to claim 22, wherein the immunogen is foreign or endogenous.

30. (Original) The composition according to claim 29, wherein the immunogen is foreign and is a member selected from the group consisting of viral proteins, bacterial proteins, parasite proteins, cytokines, chemokines, immunoregulatory agents, and therapeutic agents.

31.-61. (Cancelled)

62. (Currently amended) A method of inducing an immune response or biological activity comprising administering to a subject the rdsRP according to claim 4 via bacterial vector delivery thereof to cells or tissues of said subject, in a sufficient amount to express an effective amount of encoded passenger gene.

63. (Currently amended) The method according to claim 62, wherein ~~the~~ rdsRP is delivered with a pharmaceutically acceptable carrier or diluent to mammalian cells or tissues via a bacterial vector.

64. - 78. (Cancelled)

79. (Currently Amended) A live ~~bacteria~~ bacterium comprising at least one dsRP according to claim 4.

80. (Cancelled)

**THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK.**